

## XI. RHYNCHOTA MALAYANA.

### PART II.

By W. L. DISTANT.

The present contribution again largely refers to the Rhynchota of Borneo. The collections made by Wallace in his memorable Malayan expedition contained much Bornean homopterous material which was worked out by Walker, but this was evidently only a sample of the rich Rhynchotal fauna of that island. The Homoptera of the Dutch islands are still practically unknown. Bierman commenced the study of the Javan insects and might have adequately undertaken those of Celebes, but we have, unfortunately, to deplore his early decease. The Malay Peninsula is still somewhat unworked ground as regards the Homoptera. Annandale and Robinson have lifted the veil from the Siamese Malay States, but we cannot expect the same enthusiasm to be displayed by residents in the collection of Rhynchota as I still gratefully remember was the case with butterflies when I prepared my "Rhopalocera Malayana." As regards the Philippines, of course, Stål's "Hemiptera insularum Philippinarum" is an object-lesson to other workers.

### Sub-order HETEROPTERA.

#### Fam. PENTATOMIDÆ.

##### Sub-fam. Tessaratominæ.

##### Genus TESSARATOMA.

*Tessaratoma*, Lep. and Serv., Encycl. Meth., x, p. 590 (1825).

Type *T. papillosa*, Drury.

*Tessaratoma kinta*, sp. nov. (Pl. x, figs. 8, 8a, 8b.)

Head, pronotum and scutellum stramineous; lateral margins of head and apex of scutellum black; abdomen above black; body beneath stramineous; head beneath, rostrum, disk of prosternum, margins (more or less contentious) of meso- and metasterna, legs, and three longitudinal series of transverse segmental spots (one largest and central and one on each lateral margin) black; corium stramineous; membrane very pale stramineous; wings piceous-black, the costal and basal areas pale ochraceous; antennæ black, second and third joints subequal in length (remainder mutilated in all the specimens now before me); rostrum passing the anterior

coxæ; pronotum with the anterior angle subquadrately ampliate and moderately reflexed, these amplified areas coarsely wrinkled, remaining surface finely punctate, the anterior marginal area wrinkled and punctate; scutellum finely and sparingly punctate, the black apex foveately depressed and somewhat obscurely centrally ridged; connexivum with the posterior angles of the segments acutely produced; metasternal process compressed, elevated, its apex rounded and reaching the anterior coxæ; posterior femora with two long apical spines beneath; corium densely, finely, obscurely punctate; membrane moderately passing the abdominal apex.

Long. excl. hemelytra, ♂ and ♀, 29 to 30 mm. Breadth between pronot. angl. 16 mm. Exp. hemelytra 65 mm.

Hab.—Malay Peninsula; Perak (Doherty).

I possess four specimens (3 ♂♂, 1 ♀) of this exceedingly well-marked species which in the structure of the pronotum is allied to *T. quadrata*, Dist., from which it differs by its smaller size, different shape of the metasternal process, and the peculiar markings and coloration of the body beneath; from *T. malaya*, Stål, it is separated by the different structure of the pronotum, the different colour of the abdomen above, smaller size and the distinct markings of the body beneath. In the specimen figured the antennæ were completely mutilated.

*Tessaratomy kina*, sp. nov. (Pl. x, figs. II, IIa, IIb.)

Head, pronotum and scutellum bright shining ochraceous; lateral margins of head, antennæ and apex of scutellum black; abdomen above black, the connexivum castaneous; body beneath, rostrum and legs piceous; prosternum ochraceous with discal piceous shadings; corium bright ochraceous, membrane pale ochraceous; wings pale bronzy, subhyaline, the basal area stramineous; antennæ with the second and fourth joints subequal in length, each a little longer than the third; rostrum reaching the anterior coxæ; pronotum with the anterior angles subquadrately ampliate, these amplified areas coarsely wrinkled, remaining surface finely, sparingly punctate, the anterior marginal area somewhat transversely wrinkled; scutellum finely, obscurely punctate, the black apex broadly, longitudinally foveate; connexivum with the posterior segmental angles acute; metasternal process compressed, moderately directed upwardly, its apex rounded and reaching the anterior coxæ; rostrum reaching the intermediate coxæ; posterior femora with two long apical spines beneath; corium densely, finely punctate.

Long. excl. hemelytra, ♀, 28 mm. Breadth between pronot. angl.  $14\frac{1}{2}$  mm. Exp. hemelytra 62 mm.

Hab.—Borneo; Kina Balu (Whitehead; Coll. Dist.).

Allied to *T. kinta* but differing by the more upturned metasternal process, second joint of antennæ longer than third, the

castaneous connexivum, narrower pronotum, and different colour and markings of the body beneath.

In the figure the abdomen is a little too elongate.

### Fam. LYGÆIDÆ.

#### Genus MACROPES.

*Macropes*, Motsch., Et. Ent., viii, p 108 (1859).

Type *M. spinimanus*, Motsch.

*Macropes philippinensis*, sp. nov. (Pl. xi, figs. 7, 7a.)

Head, pronotum, scutellum, abdomen above, body beneath and legs black; first and second joints of antennæ and the tarsi sordid ochraceous; abdomen beneath ochraceously pilose; hemelytra pale creamy yellow, base, central vein and outer margin of clavus, apical angular area of corium, base of membrane and a large discal spot, black; antennæ with the second and fourth joints subequal in length, each longer than third; rostrum passing the anterior coxæ; pronotum with the anterior lobe smooth, broad, convexly narrowed to head, centrally, finely, longitudinally sulcate, behind the sulcation broadly, transversely, opaquely granulose; membrane not quite reaching the apex of the fourth abdominal segment; scutellum apically, centrally, longitudinally carinate; anterior femora very strongly incrassated and strongly spinous beneath.

Long. 9 mm.

Hab.—Philippine Islands (C. S. Banks; Brit. Mus.).

### Fam. TINGIDIDÆ.

#### Genus ELASMOGNATHUS.

*Elasmognathus*, Fieb., Ent. Monogr., pp. 30 and 90 (1844).

Type *E. helferi*, Fieb.

*Elasmognathus picturatus*, sp. nov. (Pl. x, figs. 4, 4a.)

Head piceous, greyishly pilose; antennæ pale ochraceous, the apical joint (excluding base) piceous, first and second joints brownish; pronotum castaneous, the anterior vesicle or hood and the produced lateral areas dull greyish white, the margins of the areolets darker; hemelytra with the discoidal and subcostal areas pale tawny, an oblique central line to the first and the margins of the latter castaneous-brown; costal area very pale stramineous with a dark castaneous spot beyond middle and a larger spot of the same colour at apex; sutural area greyish-brown; body beneath castaneous, thickly, greyishly pilose; legs pale ochraceous; first and second joints of antennæ strongly incrassate, fourth longer than first and second together; pronotum with the anterior hood

scarcely covering base of head, globosely erect and anteriorly convexly rounded and a little bent forwardly, the lateral areas globosely erect and a little obliquely directed outwardly, very distinctly areolate and the margins of the areolets raised and prominent; the disk reticulately granulose, tricarinate, the central carination straight and procurrent, the lateral carinations largely concealed by the produced lateral areas; hemelytra, with the areolets of the discoidal and sutural areas, small and dense, those of the latter more obscure; costal area with most of the areolets moderately large and subquadrate.

Long.  $4\frac{1}{2}$  mm.

Hab.—Borneo; Kuching (Hewitt).

Genus TELEONEMIA.

*Teleonemia*, Costa, Ann. Mus. Zool. Napoli, ii, p. 144 (1864).

Type *T. junerea*, Costa.

*Teleonemia bimaculata*, sp. nov. (Pl. x, figs. 6, 6a.)

Head and pronotum fuscous-brown; the first with a paler mark behind each eye, the latter with a transverse black spot palely margined on each side near anterior margin which is narrowly ochraceous; hemelytra with the discoidal and subcostal areas pale brownish ochraceous, the margin of the areolets a little darker, the discoidal area with two large piceous spots, one at base, the other at apex, the latter more palely and broadly continued across the subcostal and costal areas; costal area greyish with the margins of the areolets fuscous and with a piceous spot at apex; sutural area greyish brown near base, pale greyish near apex, margins of the areolets piceous; body beneath piceous, greyishly pilose, abdominal apex greyish white; legs piceous-brown; antennæ fuscous-brown, first and second joints incrassate, first a little longer than second, fourth longer than first and second together; pronotum coarsely punctate, tricarinate, the central carination straight and procurrent, the lateral carinations very short and oblique, an obscure transverse impression at their anterior termination, the apex, posterior lateral margins and the lateral carinations paler in hue; hemelytra with the discoidal area coarsely punctate, subcostal area with small areolets arrayed in longitudinal series, costal area with irregular subquadrate areolets, sutural area with the apical areolets considerably larger than those near base.

Long.  $4\frac{1}{2}$  mm.

Hab.—Borneo; Kuching (Hewitt).

*Teleonemia borneensis*, sp. nov. (Pl. x, figs. 1, 1a.)

Piceous-black; tibiæ brownish testaceous; antennæ with the first and second joints moderately incrassate, first joint longer than

second, fourth longer than first and second together ; pronotum strongly, transversely compressed near anterior margin, coarsely punctate, its apex very coarsely punctate, the central longitudinal carination strongly and acutely raised, the lateral carinations more obscure but also procurent and sinuate, the anterior marginal area robustly granulate ; hemelytra densely areolate, the areolets of the sutural area larger than those found on the remaining areas.

Long. 4 mm.

Hab.—Borneo ; Kuching (Hewitt).

*Teleonemia* (?) *elegantula*, sp. nov. (Pl. x, figs. 3, 3a.)

Head pale bluish grey, eyes dark indigo-blue ; antennæ brownish, first, second and fourth joints darker ; pronotum indigo-blue, the lateral margins and anterior area greyish white, the hood ochraceous ; hemelytra with the discoidal and subcostal areas pale bluish, a large dark indigo-blue spot occupying the central disks of both ; costal and sutural areas greyish, hyaline, the margins of the areolets brownish, the basal portion of the sutural area pale bluish ; body beneath greyish blue ; legs pale castaneous-brown ; antennæ with the first and second joints incrassate, first longer than second, fourth longer than first and second together ; pronotum with the anterior vesicle or hood somewhat compressed and pointed in front, areolate, scarcely covering base of head, globose and strongly depressed near middle, tricarinate, the lateral carinations a little sinuate and not reaching the pale anterior area, thickly punctate, more coarsely so posteriorly ; hemelytra with the discoidal and subcostal areas coarsely punctate, the costal and sutural areas areolate, the costal distinctly widened beyond middle.

Long.  $3\frac{1}{2}$  to 4 mm.

Hab.—Borneo ; Kuching (Hewitt).

## Sub-order HOMOPTERA.

### Fam. FULGORIDÆ.

#### Sub-fam. Lophopinæ.

#### Genus MAKOTA, gen. nov.

Head a little longer than space between eyes, the lateral margins strongly ridged, the apex angulate ; face with its base produced above eyes, dilated on each side before clypeus near which it is obliquely directed inwardly, centrally tricarinate, the central carination straight, the lateral carinations more roundly oblique ; clypeus centrally carinate ; pronotum broad, short, tricarinate, anteriorly a little produced between the eyes ; mesonotum large, tricarinate, the carinations continuous with those of the pronotum, the lateral ones oblique ; rostrum almost reaching the



posterior coxæ; tegmina not quite three times as broad as long, the costal and posterior margins almost straight and parallel, the apex truncate, the veins longitudinal, those on the apical area dense and numerous, the costal area with numerous slightly oblique transverse veins beyond middle; wings with a subapical series of small, fine, transverse veins; anterior and intermediate tibiæ strongly dilated, posterior tibiæ not dilated, sulcate beneath, with two strong spines beyond middle; basal joint of posterior tarsi long and thickened.

Type *M. illustris*, Dist.

*Makota illustris*, sp. nov. (Pl. xi, figs. 6, 6a.)

Vertex of head, pronotum and scutellum ferruginous-brown; apex of vertex lateral margins of pronotum and apex of mesonotum, ochraceous; abdomen above dull brownish ochraceous; face, sternum and legs dull ochraceous; legs spotted and mottled with fuscous, apices of the posterior tibiæ and tarsi piceous; abdomen beneath ferruginous-brown, more or less mottled with piceous; tegmina hyaline, the basal third, apical fourth, and claval area brownish ochraceous with piceous spots and mottlings, the opaque apical area with a hyaline spot near apex on the costal and posterior margins containing small piceous spots, and an apical hyaline margin without spots, the veins on the central hyaline area spotted with piceous, posterior margin of claval area thickly spotted with piceous; wings hyaline, apical and posterior margins broadly fuscous; structural characters as in generic diagnosis.

Long. excl. tegm. 10 mm. Exp. tegm. 26 mm.

Hab.—Borneo; Kuching (Hewitt).

*Makota notabilis*, sp. nov. (Pl. xi, figs. 1, 1a.)

Vertex of head ochraceous, with the lateral margins at the region of the eyes black; pronotum black, the carinæ and broad lateral margins ochraceous, some fine linear ochraceous spots near basal margin; mesonotum piceous; clypeus, sternum and abdomen beneath more or less piceous; face, legs and lateral spots to abdomen ochraceous; legs spotted with piceous, margins of femora and apices of tibiæ and tarsi black; tegmina pale ochraceous subhyaline, basal fourth, apical third, and claval area black, a pale ochraceous subhyaline spot near apex on the costal and posterior margins containing small piceous spots and an apical subhyaline margin without spots, the veins on the central pale area spotted with black.

Long. incl. tegm. 13 mm.

Hab.—Borneo; Kuching (Hewitt).

Allied to *M. illustris* but differing in the less developed anterior tibiæ, the more acutely posteriorly widened face, the piceous clypeus, darker coloration, etc.

Genus *ALUMA*, gen. nov.

Vertex about as long as breadth between eyes, the lateral margins strongly ridged and a little angulate on each side at their apices; face long, much longer than clypeus, the base produced beyond eyes, gradually widened towards clypeus before which it is again bent inwardly, tricarinate, the lateral carinations very robust; clypeus centrally carinate; rostrum passing the intermediate coxæ; anterior and intermediate tibiæ dilated, posterior tibiæ not dilated and armed with two strong spines beyond middle, the apical spines well developed; basal joint of posterior tarsi long and strongly thickened; tegmina about three times as long as broad, the costal area with oblique transverse veins, veins on remaining surface longitudinal, on apical area dense and numerous, with numerous short transverse veins, and a distinct subapical transverse series defining a short subapical area, costal margin moderately sinuate, apex slightly rounded, inner margin a little dilated beyond claval apex; pronotum short and broad, centrally tricarinate, its apex moderately produced between eyes, its lateral angles subacute; mesonotum broader than long, tricarinate, the carinations continuous with those on pronotum.

Type *A. ocellata*, Dist.

The shape and venation of the tegmina as well as the structure of the face will distinguish this genus from *Makota*, to which it is allied.

*Aluma ocellata*, sp. nov. (Pl. xi, figs. 3, 3a.)

Body above and tegmina black; body beneath and legs piceous, the anterior and intermediate tibiæ above obscurely banded with black; tegmina with a large subapical ocellate spot, black, margined with reddish brown and with a small white pupillate spot situate nearer its hinder extremity, a few scattered obscure greyish spots near middle of costal area; tarsi and disk of sternum brownish ochraceous; structural characters as in generic diagnosis.

Long. incl. tegm. 14 mm.

Hab.—Borneo; Kuching (Hewitt).

Genus *SAREBASA*, gen. nov.

Head a little longer than breadth between eyes, a bent transverse impression between the eyes, in front of which are two prominent ridges gradually directed outwardly, the lateral margins in front of eyes raised and acute, their apices, with those of the two central ridges, having the appearance of four short spines in transverse series; posteriorly the head is a little narrowed between the eyes, widened anteriorly and apically subtruncate; face with its base projecting above the eyes where it is narrowest, and then gradually widened to a little before clypeus to which it is again inwardly directed, tricarinate, the central carination straight, the

lateral carinations parallel to the lateral margins; clypeus about as long as face, centrally carinate; rostrum reaching the posterior coxæ; pronotum short and broad, strongly narrowed from basal angles (which are subprominent) to between eyes, the apical margin rounded, basal margin truncate, tricarinate on disk, the central carination straight, the two lateral carinations rounded and meeting in front; mesonotum broad, tricarinate; femora moderately broad and flattened, beneath strongly, longitudinally ridged; anterior tibiæ moderately dilated, posterior tibiæ widened from base to apex which is broad and subtruncate; two prominent spines, one near base, the other near apex; basal joint of the posterior tarsi broadly thickened, longer than remaining joints together; tegmina more than twice as long as broad, costal margin rounded, apex broad, truncately rounded, posterior margin widened and rounded beyond claval apex, costal area obliquely veined, remaining veins longitudinal, dense and numerous on apical half.

Type *S. celebris*, Dist.

*Sarebasa celebris*, sp. nov. (Pl. xi, figs. II, IIA.)

Vertex pale luteous, the lateral margins in front of eyes with black ringlets; pronotum fuscous-brown, the anterior and lateral margins and a series of small spots at basal margin pale luteous; mesonotum and abdomen above fuscous-brown, the latter with the segmental margins pale; face pale luteous, its lateral areas with transverse black spots, its central area with two transverse black spots; clypeus black; body beneath and legs fuscous-brown or piceous; sides of face, spots to anterior and intermediate tibiæ, the posterior tibiæ excluding apices and margins of the abdominal segments beneath, pale luteous; tegmina pale greyish ochraceous, transversely shaded with piceous as shown in figure; wings hyaline, the veins and broad apical and outer margins fuscous; structural characters as in generic diagnosis.

Long. excl. tegm. 9 mm. Exp. tegm. 23 mm.

Hab.—Malay Peninsula; Selangor (H. E. Durham; Brit. Mus.).

Genus *APIA*, gen. nov.

Vertex about as long as breadth between eyes, the apical margin rounded and slightly angulated on each side; face long, truncate at base, gradually and slightly widened towards clypeus before which it is narrowed on each side; rostrum mutilated in typical specimen; pronotum short and broad, tricarinate, the central carination straight, the lateral carinations meeting in front of it, anteriorly conically produced between the eyes; mesonotum large, broad, tricarinate, the central carination straight, the lateral carinations oblique; abdomen above centrally ridged, the ridge appearing dentate by the compression of the abdominal segments; legs of moderate length and size, anterior tibiæ slightly but not prominently dilated, posterior tibiæ with two spines somewhat



close together, a little beyond middle; tegmina nearly three times as long as broad, the costal area obliquely veined, remaining venation longitudinal, becoming dense and close towards apical area.

Type *A. lineolata*, Dist.

*Apia lineolata*, sp. nov. (Pl. xi, figs. 10, 10a.)

Head, pronotum and scutellum ochraceous, with longitudinal piceous lines, five on vertex of which three are discal and two marginal, ten on pronotum and about the same number on mesonotum; abdomen dark brownish, the segmental margins piceous; body beneath and legs ochraceous, face, with the margins and seven longitudinal lines, piceous; legs with piceous longitudinal lines; tegmina ochraceous mottled with greyish, costal area beyond basal third greyish with oblique fuscous lines, the longest crossing apical area, two transverse and bent almost parallel with apical margin, a piceous subapical spot near posterior margin; wings pale fuliginous, posterior and apical margins broadly fuscous; structural characters as detailed in generic diagnosis.

Long. excl. tegm. 8 mm. Exp. tegm. 24 mm.

Hab.—Malay Peninsula; Singapore (H. N. Ridley; Brit. Mus.).

#### Genus VARMA.

*Varma*, Dist., Faun. Brit. Ind. Rhynch., iii, p. 330 (1906).

Type *V. fervens*, Walk.

*Varma obliqua*, sp. nov. (Pl. xi, figs. 8, 8a.)

Vertex, pro- and mesonota, face, sternum and legs pale ochraceous; abdomen brownish ochraceous, above marginally and centrally castaneous; tegmina subhyaline, the costal and apical areas, claval margins, and an oblique fascia before the apical area dull ochraceous, above the fascia on costal margin is a small piceous spot; wings hyaline, the veins and apical area dull ochraceous: face with the central and lateral carinations robust and much darker in hue, as is also the central carination to the clypeus, posterior tibiae with two strong spines beyond middle, preceded by a shorter and almost obsolete spine.

Long. excl. tegm. 6 mm. Exp. tegm. 18 mm.

Hab.—Malay Peninsula; Perak (Doherty).

#### Genus SERIDA.

*Serida*, Walk., Journ. Linn. Soc. Lond. Zool., 1, p. 158 (1857).

Type *S. latens*, Walk.

*Serida balteata*, sp. nov.

Vertex, pronotum and mesonotum piceous; basal margin, central and marginal ridges to vertex, lateral margins, central

carinations and longitudinal lines and spots on each lateral area of pronotum, central carinations, lateral margins, apex, irregular fasciæ on lateral areas and the margins of two small, dark, sub-apical spots to mesonotum, ochraceous; face, sternum and legs ochraceous; a central longitudinal fascia to face and clypeus, lateral margins of prosternum, a small apical and subapical spot to femora beneath and a spot behind eyes, black; abdomen mutilated in the two typical specimens now before me; tegmina hyaline, the veins, basal third of costal area attached to a transverse fascia which extends through corium and clavus, large suffusions on apical area which principally take the form of two transverse fasciæ fused internally and forming a large x-shaped spot, apical margin and posterior claval margin piceous-brown; wings hyaline, apical margins broadly piceous-brown; vertex longer than broad, the ridges prominent; face sub-angulately broadened beyond middle.

Long. incl. tegm. 11 mm.

Hab.—Cambodia (Mouhot; Brit. Mus.).

#### Genus CATARA.

*Catara*, Walk., Journ. Linn. Soc. Lond. Zool., x, p. 115 (1868).

Type *C. subdivisa*, Walk.

#### *Catara subdivisa*.

*Catara subdivisa*, Walk., Journ. Linn. Soc. Lond. Zool., x, p. 115 (1868).

*Serida proxima*, Walk., loc. cit., p. 183 (1868).

Hab.—Morty Islds; Batchian (Doherty).

#### *Catara philippinensis*, sp. nov. (Pl. xi, figs. 12, 12a.)

Body above and abdomen beneath more or less ferruginous-brown; face, sternum and legs brownish ochraceous; tegmina brownish ochraceous, the base of costal area piceous, remainder of costal area, the apical area, and two transverse fasciæ somewhat at right angles to each other fuscous-brown; wings hyaline, slightly fuliginous, the veins fuscous; vertex broader than long, centrally and marginally ridged; pronotum narrow, strongly anteriorly produced in front of eyes, posteriorly deeply angularly sinuate, all the margins ridged and with a prominent central longitudinal carination; mesonotum long, tricarinate; face elongate, the margins ridged, centrally longitudinally carinate, its base considerably above eyes and truncate, gradually widened towards clypeus before which it is obliquely turned inwardly; clypeus short and centrally carinate; rostrum reaching the posterior coxæ; posterior tarsi with two spines somewhat close together beyond middle; tegmina with the costal area obliquely veined, a curved transverse vein defining a closely longitudinally veined apical area, before which is another series of irregular transverse veins.

Long. excl. tegm. 7 mm. Exp. tegm. 18 mm.

Hab.—Philippine Islds. (C. S. Banks; Brit. Mus.).

Allied to *C. subdivisa*, Walk., but differing by the shorter pronotum, different markings to the tegmina, etc.

Genus JIVATMA.

*Jivatma*, Dist., Faun. Brit. Ind. Rhynch., iii, p. 328 (1906).

Type *J. metallica*, Dist.

*Jivatma insignis*, sp. nov. (Pl. xi, figs. 9, 9a.)

Vertex stramineous, the margins and those of the central carination brownish; pro- and mesonota ferruginous-brown, the latter between the carinations piceous; abdomen ferruginous-brown, sternum and legs brownish ochraceous; face and clypeus stramineous; tegmina umber-brown, the costal area with whitish transverse linear spots or stripes, a greyish white patch extending round costal and apical margins containing five brown streaks, of which three are outwardly oblique, one inwardly oblique and the fifth longitudinal, a small black spot near posterior angle; wings pale fuliginous, the veins darker; vertex centrally and marginally carinate; face tricarinate; clypeus with the central carination fine but distinct; rostrum about reaching the posterior coxæ; pro- and mesonota tricarinate; posterior tibiæ with three spines, two beyond middle and one at apex.

Long. excl. tegm. 6 mm. Exp. tegm. 19 mm.

Hab.—Borneo; Kuching (Hewitt).

*Jivatma whiteheadi*, sp. nov.

Vertex, pronotum and mesonotum brownish ochraceous, pronotum and mesonotum with two broad longitudinal piceous fasciæ only separated by the pale central longitudinal carination and outwardly defined by the lateral carination on each side, on mesonotum these fasciæ do not extend to the posterior apex; abdomen above and beneath more or less piceous; face, sternum and legs ochraceous; tegmina pale ochraceous, the costal area from base to beyond middle more or less greyish subhyaline with very obscure obliquely transverse ochraceous lines, beyond this pale area are five greyish subhyaline lines, commencing on costa and scarcely reaching middle of tegmen, the first three oblique, the fourth and fifth straightly transverse, the fifth subapical; proceeding from the outer angle of the posterior margin are two or three similar but shorter lines, the apical margin is more obscure greyish, and near the posterior angle is a black faintly ocellate spot outwardly margined with reddish ochraceous; wings pale fuliginous, a little darker at apex; vertex slightly longer than breadth between eyes, centrally and laterally strongly ridged; face with the angles before clypeus rather strongly produced, making the breadth there almost equal to the length.

Long. excl. tegm.  $5\frac{1}{2}$  mm. Exp. tegm. 20 mm.  
 Hab.—Philippine Islds. (Whitehead; Brit. Mus.).

Genus LOPHOPS.

*Lophops*, Spin., Ann. Soc. Ent. Fr., viii, p. 387 (1839).  
*Cystinocephala*, Stål, Öfv. Vet.-Ak. Förh., 1853, p. 266.  
*Gozarta*, Walk., Journ. Linn. Soc. Lond. Zool., x, p. 116  
 (1868).

Type *L. servillei*, Spin.

*Lophops zebra*.

*Gozarta zebra*, Walk., Journ. Linn. Soc. Lond. Zool., x, p. 116  
 (1868).

Hab.—Malay Archipelago; Tidor<sup>1</sup> (Wallace); Malay Peninsula; Selangor (Durham; Brit. Mus.).

Fam. CERCOPIDÆ.

Sub-fam. Aphrophorinæ.

Genus PTYELUS.

*Ptyelus*, St. Farg. and Serv., Enc. Meth., x, p. 608 (1825).  
*Philænus*, Stål, Stett. Ent. Zeit., xxv, p. 66 (1864).  
*Amarusa*, Walk., Journ. Linn. Soc. Lond. Zool., i, p. 166  
 (1857).

Type *P. flavescens*, Fabr.

*Ptyelus piceus*.

*Amarusa picea*, Walk., Journ. Linn. Soc. Lond. Zool., i, p. 166  
 (1857).

*Ptyelus tenebrifer*, Walk., List Hom. Suppl., p. 189 (1858).

Hab.—Borneo.

Genus PLINIA.

*Plinia*, Stål, Hem. Afr., iv, p. 66 (1866); *Id.*, Berl. Ent.  
 Zeitschr., x, p. 384 (1866).

Type *P. ampla*, Walk.

*Plinia pilosa*, sp. nov. (Pl. x, figs. 12, 12a.)

Black, thickly brownly pilose, tegmina more thickly and longly pilose, the hairs being arranged in tufts; vertex distinctly shorter than pronotum, somewhat conically rounded in front of eyes; face somewhat long and prominent, centrally a little flattened where there is a central longitudinal raised line, the lateral areas strongly, transversely striate; clypeus with a central longitudinal raised line which is widened posteriorly but does not reach apex; rostrum reaching the intermediate coxæ; posterior femora with two strong spines; tegmina very strongly and broadly wrinkled on the claval area.

<sup>1</sup> By a misprint in Walker's paper this locality reads "Tidon."



Long. 15 mm.

Hab.—S.-E. Borneo (Doherty; Coll. Dist.).

Allied to *P. ampla*, Walk., but differing by the shorter vertex, which in *ampla* is as long as the pronotum, very much more strongly pilose, claval area strongly wrinkled, and by the absence of the red margin to vertex as in *P. ampla*.

#### Genus CLOVIA.

*Clovía*, Stål, Hem. Afr., iv, p. 75 (1866).

Type *C. bigoti*, Sign.

*Clovía humboldtiana*, sp. nov. (Pl. x, figs. 7, 7a.)

Black or piceous; a central longitudinal stramineous fascia traversing the vertex, pronotum and scutellum; tegmina with six stramineous spots situate two in clavus—one at base elongate, the other near middle transversely oblique—and four on coriaceous area—two near costal margin and two on apical area; face and legs brownish, the posterior legs sometimes piceous; lateral and basal margins of face and a longitudinal fascia on each side of sternum, stramineous; vertex subequal in length to pronotum, anteriorly somewhat obtusely, roundly, angularly produced, and with an obscure, fine, transverse impression on disk; vertex, pronotum and scutellum finely punctate, the pronotum also very finely wrinkled; face flattened though very slightly convex; posterior tibiae with two spines; tegmina densely, finely punctate.

Long. 8 to 9 mm.

Hab.—New Guinea; Humboldt Bay (Doherty; Brit. Mus.).

Allied to *C. ornata*, Walk.

*Clovía moresbyensis*, sp. nov. (Pl. x, figs. 9, 9a.)

Vertex, pronotum and scutellum piceous-brown; vertex with a narrow, black, marginal line in front of eyes, this line inwardly broadly margined with dull ochraceous; pronotum with a narrow transverse pale yellow line before middle; face, abdomen beneath and legs pale castaneous-brown; sternum piceous; basal and lateral margins of face, a submarginal fascia on each side of sternum, apex of clypeus, under surfaces and apices of femora and abdominal segmental margins, ochraceous; tegmina piceous-brown, an oblique spot before middle of clavus not reaching claval suture and extending over its inner margin a short way into the corium, and two small spots in oblique series on apical area pale ochraceous; vertex about as long as pronotum, obtusely, angularly produced anteriorly; rostrum reaching the intermediate coxæ; vertex, pronotum and scutellum very finely, transversely wrinkled; tegmina obscurely, densely, finely punctate; posterior tibiae with two spines.

Long. 11 mm.

Hab.—New Guinea; near Port Moresby.

Allied to *C. varipes*, Walk.

*Clovia pilosula*, sp. nov. (Pl. x, figs. 10, 10a.)

Vertex, pronotum and scutellum obscure ochraceous, sometimes brownish; vertex very narrowly margined with black in front of eyes, and with a short, central, transverse, dark line on disk: pronotum with six darkly impressed spots near anterior margin, face and scutellum black; sternum, legs and abdomen beneath more or less brownish ochraceous; basal and lateral margins of face, and a broad sublateral fascia on each side of sternum, golden yellow; apices of posterior tibiæ and the posterior tarsi piceous; tegmina piceous-brown, pilose; clavus (excluding apex) obscure ochraceous; a short oblique fascia crossing clavus beyond middle but not extending to middle of corium, extreme apex of clavus, and an oblique curved fascia extending from costal margin at commencement of apical area and extending to apex, pale dull ochraceous; vertex almost as long as pronotum, obtusely, angularly rounded anteriorly; rostrum reaching the intermediate coxæ; vertex, pronotum and scutellum very finely wrinkled; tegmina densely, finely pilose; posterior tibiæ with two spines.

Long. 10½ to 12 mm.

Hab.—S.-E. Borneo (Doherty).

*Clovia batchianensis*, sp. nov.

Vertex, pronotum and scutellum pale ochraceous, vertex and pronotum with darker longitudinal lines of which two are central and procurrent, and on each side of these are one on vertex and two on pronotum, some linear spots on scutellum (imperfectly seen in type owing to the specimen being pinned in that locality), body beneath and legs pale brownish ochraceous; a narrow basal line to face, apices of tarsi and apices of the posterior tibiæ black; tegmina brownish, pilose, an oblique macular fascia crossing base of clavus to costal margin before middle, and an obscure discal oblique suffusion, and two oblique linear spots on apical area—the uppermost at about one-third from apex and the other on apical costal margin—pale ochraceous; vertex a little shorter than pronotum, obtusely angularly rounded in front; rostrum reaching the intermediate coxæ; upper surface more or less shortly, finely pilose, the tegmina more densely and longly pilose; posterior tibiæ with two spines.

Long. 9 mm.

Hab.—Batchian Island (Doherty).

*Clovia signifera*.

*Perinoia signifera*, Walk., Journ. Linn. Soc. Lond. Zool., i, p. 166 (1857).

Hab.—Borneo.

*Clovioa expressa*.

*Perinoia expressa*, Walk., Journ. Linn. Soc. Lond. Zool., i,  
p. 167 (1857).

Hab.—Borneo.

*Clovioa exclamans*.

*Perinoia exclamans*, Walk., Journ. Linn. Soc. Lond. Zool., i,  
p. 166 (1857).

Hab.—Borneo.

*Clovioa ornata*.

*Perinoia ornata*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 294 (1869).

Hab.—Dorey, New Guinea.

*Clovioa deflexa*.

*Perinoia deflexa*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 295 (1869).<sup>1</sup>

Hab.—Mysol (Wallace); New Guinea, Humboldt Bay  
(Doherty).

*Clovioa disjuncta*.

*Perinoia disjuncta*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 295 (1869).

Hab.—Dorey, New Guinea.

*Clovioa subjuncta*.

*Perinoia subjuncta*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 295 (1869).

*Perinoia placens*, Walk., *loc. cit.*, p. 296.

Var. *Perinoia semijuncta*, Walk., MS.

Hab.—Philippines; N. Luzon (Brit. Mus.), Amboina, Aru,  
Mysol, Batchian, Morty, New Guinea (Wallace; Brit. Mus.).

Two specimens labelled *semijuncta*, Walk., are contained in the British Museum, but I can find no trace of a description. It appears to be a variety of *C. subjuncta*, Walk., from which it differs by the following characters in coloration: The face is ochraceous, not black, but with the same stramineous margination; the transverse black band to the pronotum is broader; and the apical pale margin to the tegmina is not continuous to the claval apex, but terminates at the inner apical angle.

*Clovioa furcata*.

*Perinoia furcata*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 297 (1869).

*Perinoia furcifera*, Walk., *loc. cit.*

Hab.—Sula, Ceram.

<sup>1</sup> *Perinoia separata*, Walk. (*loc. cit.*, p. 294), seems, from the description, to be closely allied to this species, but the type is no longer to be found, and under these circumstances I regard it as a non-existent species. Kirkaldy (Trans. Ent. Soc. Lond., 1905, p. 330) comparatively refers to *separata*, Walk. This may, perhaps, be a slip of the pen.

*Clovia subfurcata.*

*Perinoia subfurcata*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 298 (1869).

Hab.—Gilolo, Ternate (Wallace); Batchian (Doherty).

*Clovia plena.*

*Perinoia plena*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 298 (1869).

Hab.—Sula.

*Clovia lituriplena.*

*Perinoia lituriplena*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 296 (1869).

Hab.—Mysol.

*Clovia varipes.*

*Perinoia varipes*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 300 (1869).

Hab.—Batchian.

*Clovia comma.*

*Ptyelus comma*, Walk., List. Hom. Suppl., p. 190 (1858).

Hab.—Sumatra.

*Clovia transversa.*

*Perinoia transversa*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 299 (1869).

*Perinoia pustuliceps*, Walk., *loc. cit.*

Var. *Perinoia badia*, Walk., *loc. cit.*

Differs from the typical form by the absence of the luteous transverse line to the pronotum.

Hab.—Mysol, New Guinea, Aru.

*Clovia plenipennis.*

*Ptyelus plenipennis*, Walk., Journ. Linn. Soc. Lond. Zool., x,  
p. 293 (1869).

*Ptyelus frontalis*, Walk., *loc. cit.*

Hab.—New Guinea, Aru.

#### Genus PHILAGRA.

*Chalepus*, Walk., List. Hom., iii, p. 731 (1851), *nom. præocc.*

*Philagra*, Stål, Trans. Ent. Soc. Lond. (iii), i, p. 593 (1862).

Type *P. hastata*, Walk.

*Philagra cephalica*, sp. nov. (Pl. x, figs. 5, 5a, 5b.)

Head, pronotum, scutellum, sternum and legs fuscous-brown, very finely, greyishly pilose; abdomen above and beneath shining black; lateral margins of meso- and metasterna broadly ochraceous; bases of the posterior tibiæ brownish ochraceous; tegmina pale castaneous-brown, thickly mottled with obscure, irregular reddish spots; wings pale fuliginous, the veins black, the costal area hyaline; head longly produced, the vertex more than twice as long as pronotum, centrally longitudinally ridged, the lateral



margins also ridged; pronotum with a central, longitudinal, incised line on disk, on each side of which, a little before middle, is a distinct foveate impression; face with a central longitudinal ridge; rostrum reaching the intermediate coxæ; posterior tibiæ with two spines, the basal spine shortest.

Long. excl. tegm. 16 mm. Exp. tegm. 29 mm.

Hab.—Cambodia (Mouhot; Brit. Mus.).

*Philagra provecta*, sp. nov. (Pl. xi, figs. 5, 5a, 5b.)

Head above, pronotum and scutellum black, thickly, finely, shortly, greyishly pilose; abdomen above and body beneath black and less pilose; apex of produced vertex, apex of scutellum, base of face, lateral margins of sternum, and the legs, brownish ochraceous; tegmina brownish ochraceous with piceous suffusions; wings hyaline with an ochraceous tint, the veins brownish ochraceous; head about as long as pronotum and scutellum together, somewhat evenly and parallelly produced from about one-third in front of eyes, curved upwardly; three short longitudinal impressions on anterior area of pronotum; abdomen above shining black, the apical area more piceous-brown; face finely, transversely wrinkled; posterior tibiæ with two prominent spines.

Long. excl. tegm. 12 mm. Exp. tegm. 22 mm.

Hab.—Sangir (Doherty).

### Sub-fam. Cercopinæ.

Genus *EOSCARTA*.

*Eoscarta*, Bredd., Soc. Ent., xvii, p. 58 (1902).

Type *E. borealis*, Dist.

*Eoscarta rana*, sp. nov. (Pl. x, figs. 2, 2a.)

Body and legs piceous-black, the upper surface of the abdomen shining; almost the posterior half of the pronotum, but not extending to the lateral angles, flavescent; tegmina flavescent, the basal third piceous-black; wings hyaline, the basal area infusate; face longitudinally and somewhat broadly sulcate; vertex about as long as breadth between eyes, rather angularly rounded in front; pronotum densely, finely punctate and faintly transversely wrinkled; scutellum distinctly centrally, roundly foveate; tegmina somewhat granulosely wrinkled; posterior tibiæ with a somewhat long spine.

Long. excl. tegm.  $6\frac{1}{2}$  mm. Exp. tegm. 18 mm.

Hab.—Borneo; Kuching (Hewitt).

*Eoscarta monostigma*.

*Ptyelus monostigma*, Walk., Journ. Linn. Soc. Lond. Zool., x, p. 293 (1869).

*Ptyelus impressus*, Walk., loc. cit., p. 294.

*Ptychus concolor*, Walk., MS.

Hab.—Morty Island, New Guinea.

The *P. concolor*, Walk., MS., is not the species described by Walker under the same name in List Hom., iii, p. 715 (1851), the latter being a synonym of *Poophilus costalis*, Walk.

In this small species the longitudinal furrow is frequently indiscernible or almost so in certain specimens.

### Fam. JASSIDÆ.

#### Sub-fam. Ledorinæ.

Genus LEDRA.

*Ledra*, Fabr., Syst. Rhyng., p. 24 (1803).

Type *L. aurita*, Linn.

*Ledra muda*, sp. nov. (Pl. xi, figs. 4, 4a.)

Ferruginous-brown; apical area of head, posterior two-thirds of pronotum and basal area of face obscure plumbeous; tegmina subhyaline, talc-like, the veins reddish brown, the basal area reddish brown followed by an obliquely transverse darker fascia; wings subhyaline and talc-like, the veins reddish brown; vertex little more in length than half the breadth between eyes, the disk finely granulate, coarsely granulate on apical area and somewhat coarsely so on lateral marginal areas, centrally longitudinally ridged, the ocelli a little nearer to each other than to eyes, and from each ocellus there is obliquely directed a short but distinct sharp impression; between ocelli and eyes is a small but distinct tubercle; pronotum with a subangulate transverse impression separating the narrow anterior paler area, the whole surface sparsely granulose, the granules larger and coarser towards base, on the posterior and darker area are four longitudinal ridges of which the two central are more distinct and granulose; scutellum finely, sparsely granulose, two prominent discal granules nearer to lateral margins than to each other; face broadly concave; rostrum reaching intermediate coxæ; anterior tibiæ moderately dilated, the margins longly, thickly pilose and sparsely granulose beneath, posterior tibiæ outwardly dilated, shortly, finely, obscurely serrate internally, externally widened beyond middle, shortly hirsute and with scattered short spines; tegmina with the basal opaque area punctate, with a few scattered granules and a few obscure pale spots.

Long. excl. tegm. 13 mm. Exp. tegm. 26 mm.

Hab.—Borneo; Kuching (Hewitt).

*Ledra gigantea*, sp. nov. (Pl. xi, figs. 2, 2a.)

Ferruginous-brown; tegmina with a piceous spot at inner margin near apex; wings subhyaline, talc-like, the veins ferruginous-brown; vertex about as long as space between eyes, coarsely

granulose except on basal area, ocelli a little nearer to each other than to eyes; pronotum not centrally longitudinally ridged, sparingly coarsely granulate, moderately raised before scutellum, the lateral margins moderately convex and finely dentate; scutellum finely punctate, a slight elongate elevation at apex; face broadly concave; rostrum mutilated in typical specimen; anterior tibiæ dilated, their outer margins longly pilose; posterior tibiæ broadly dilated, their outer margins hirsute, undulatory, dentate, narrowing towards base and apex, sparingly coarsely granulate; tegmina with the basal area punctate, with a few scattered granules, more abundant on basal third.

Long. excl. tegm., ♀, 28 mm. Exp. tegm. 46 mm.

Hab.—Borneo; Matang (Hewitt).